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'Open-sourcing' personal learning

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Abstract: This article offers a critical reflection on the contemporary Open Educational Resource (OER) movement, its unquestioned investment in a collective 'content fetish' and an educational 'problem description' that focuses on issues of scarcity, access, and availability of quality materials. It also argues that OER proponents fail to take notice of historically new forms of learning activity emerging within the unfolding digital transformation of our global society. The article reviews some descriptive accounts of such learning activity and suggests that 'networked autodidaxy' in particular can provide inspiration for the critical review of our ideas regarding open resources and practices in education

Keywords: Open educational resources, emerging learning activity, networked autodidaxy, personal learning, digital transformation

Introduction

While I have always found myself close to the core ideas promoted by the 'free and open culture' movement in general, I have never felt really at ease with all the attempts to promote and celebrate open educational resources (OER) as a major development with truly transformative potential. I have never managed to get as excited as, for example, Iiyoshi and Kumar (2008) when they announced that 'tens of thousands of course Web sites and other educational materials are now freely available from hundreds of institutions, organizations, and projects from thousands of educators around the world, representing an unprecedented upsurge in access to educational resources…' (p. 2-3).

Annunciations like this have always left me rather unimpressed. The main reason for this has always been and continues to be that I have hardly found myself in situations where my personal learning, or teaching for that matter, was severely impaired by the lack of access to 'educational resources' of acceptable quality. Regardless of my particular learning intentions I tend to find myself in a situation of abundance, not scarcity. Access

is very rarely an issue. And I would like to argue that this is a pretty common experience for anyone who has grown up and continues to live in parts of the so called first world, or 'developed' societies. Even in pre-digital times a myriad of learning intentions could be met within a rich landscape of free or very affordable offers from city libraries, community colleges, book stores, public TV, free public universities and their libraries, and so forth. Digitisation and networking only continues to re-mediate and dramatically simplify the access to an ever-expanding pool of cultural artefacts and potential resources for learning. That parts of some Western societies are presently getting so thrilled about 'open educational' offers such as open online courses, only reflects the gradual cultural loss of core ideas of common goods and services in recent decades. It doesn't really surprise that the discourse on OER is presently dominated by scholars from the US and the UK, where the access to higher education is increasingly built on the concept of personal or familial financial indebtedness.

The majority of our present, global society, however, does not live in environments that are as materially privileged as I have sketched it above. From a perspective of difficult or uneven access the Open Educational Resources (OER) movement might offer a first-line solution. Some authors, such as Oblinger and Lombardi (2008) thus suggest that the term 'open educational resources,' first heard at a 2002 UNESCO forum, is commonly used to describe a strategy for sharing timely teaching materials (content modules, courseware, learning objects, online learning communities) that would otherwise not be available to instructors in less-developed countries…' (p. 369). The OER movement seems certainly broader than this particular interpretation suggests and naturally offers a variety of terminological boundaries.

Be that as it may, I would like to point my reflection back to the implicit, or explicit, standard notion within the OER movement that quality content, or rather its lack, is the main educational challenge of our times. With its focus on open and reusable content, modules, course packages, and entire curricula, OER initiatives tend to remain within the boundaries of the established activity systems of 'schooling' that are formed around the seemingly incontrovertible claim that all serious learning activity has to be closely-coupled to a corresponding teaching activity (executed by either a human actor or technical system) and its instrumentation. By limiting their efforts on issues of 'quality content', its design and production, licensing, distribution, and so forth, many proponents of OER fail to run a broader analysis of the cultural-historical development of learning activity to date, and its potential (or already emergent) further development in the light of the unfolding digital transformation of our societies. A good part of the present OER movement seems to be driven by the same old 'content fetish' that Gee (2004) identified as a principal barrier to transformative change in formal education.

In the face of this continuously re-enacted and reproduced 'content fetish' in our formal educational systems even proponents of OER seem to have their second thoughts. Iiyoshi and Kumar (2008), for example, remind their audience that "despite the increasing interest in open education and the availability of these growing collections of educational tools and resources, we risk missing the transformative and innovative opportunities,…' (p. 3). I wholeheartedly agree. And as I have tried to suggest above, I

am not at all convinced that the provision of open, digital educational resources as such, constitutes a major transformative opportunity at this present stage of development, at least not in 'first world' societies already experiencing material abundance and an accelerated expansion of cultural production in the digital realm.

To be clear, there are some indisputable advantages and benefits if practices such as the use of open licenses are promoted and established within formal education and other societal activity systems. However, I would argue that 'transformative opportunities' could rather be realised around learning activity and its further development. From this perspective it seems useful to first conceptualise and examine learning activity (German: Lerntätigkeit) as a product of cultural historical-development (see for example Roth & Lee, 2007).

Learning activity as a product of cultural-historical development

From a cultural-historical perspective it is important to distinguish between learning as a process embedded ***in*** activity and learning ***as*** activity. Fundamental processes of learning are undoubtedly part of the biological make-up of human beings, allowing for a flexible adaptation to the environment through the modification of behaviour. Through cultural-historical development, however, humans have increasingly shaped and changed their environment and society and objectified their collective accomplishments through the production of a great variety of artefacts and cultural instruments. While learning (as a process) was historically embedded in collective (work) activity, it emerged as a specific activity only slowly over time. Lompscher and Hedegaard (1999), for example, describe contemporary learning activity in the following words: "It is a special kind of activity directed towards the acquisition of societal knowledge and skills through their individual re-production by means of special learning actions upon learning objects (subject matter methods and knowledge)'' (p. 12). Erdmann and Rückriem (2010) rightfully emphasise that this development of 'learning activity' as a specific activity was closely tied to the emergence and dissemination of a new media-historical form of knowledge within the 'print and book culture' (see also Giesecke, 2002) and its accompanying societal challenges and demands. Before the book (printed text) emerged as the new leading medium, learning was predominantly contextualised and experience based. It was coupled to the body and (mostly local) social practice. Observation, co-ordinated action, apprenticeship, and so forth, characterise this form of learning. Only in the print and book culture de-contextualised, systematically instructed learning becomes the dominant format and gets institutionalised in 'school'. Over time the development of public, compulsory schooling ensured that learning activity (for an historic reconstruction see for example Fichtner, 1996) became the dominant form of cultural appropriation through learning.

While earlier forms of learning have never been replaced entirely, they certainly became more and more marginalised within, so-called, developed societies. The ensuing societal monopoly of teaching or instruction dependent learning activity resulted in the gradual

expansion and differentiation of activity systems of 'schooling' stretching over ever-wider parts of a human lifespan. Over time, this ever-growing monopoly of 'schooling' over societally accredited and organised human change through learning has been challenged and tested regularly on educational, psychological, economical and philosophical grounds. A well-known and particular outspoken critique was formulated by Illich (1971) who called for nothing less than the comprehensive 'deschooling of society'. In adult education some scholars tried - albeit with limited success - to emphasise the necessity to foster self-direction in learning and the importance of adult learning projects outside out formal educational environments (see for example Brookfield, 1986; Knowles, 1975, 1984; Tough, 1971). At large, however, it seems fair to attest that many of these attempts to systematically emancipate learning activity from teaching and from being 'other-organised' (Harri-Augstein & Thomas, 1991; Thomas & Harri-Augstein, 1985) were undermined or assimilated by the overall activity system of 'schooling' and its numerous disciples and avid defendants within the various professions.

The academic body of literature on self-direction in learning itself might serve as a good example for this tendency in educational practice and research. In his comprehensive literature review Candy (1991) attested that in parallel to the professionalisation and formalisation of education "the debate about self-direction in learning has largely shifted from an concentration on the independent pursuit of learning opportunities (autodidaxy) to methodological and other issues surrounding the involvement of learners in determining the form and focus of instruction (learner control)'' (p. 30). Candy also demonstrated in his analysis that only a fraction of the literature on self-direction in learning actually deals with independent, informal, adult learning projects of any kind for which Candy suggested to reserve the label 'autodidaxy'.

Candy (1991) had carried out his literature review at a time when digitisation and networking within our society was in its infancy. Thirteen years later he still felt the need to comment on the ongoing marginalisation of 'self-directed learning' on one hand, while offering a rather optimistic outlook for its increasing importance within the unfolding digital transformation:

"Self-directed learning is often portrayed somewhat unfairly as a dilettante activity, an adornment to the real business of learning that occurs in schools, colleges, universities and training centres. While this was probably never a fair characterisation, it is even less true today, when the sheer volume of information combined with the rapidity of change has catapulted us into an era of continuous learning, most of which is self-directed. Far from being a marginal activity, self-directed learning is now a major way in which people cope with the turbulent and unpredictable worlds in which they find themselves both personally and professionally. If the move of self-directed learning from the periphery to the core is notable, so too is the move of technology within self-directed learning from the periphery to the core...'' (Candy, 2004, p. 281-282).

One would expect that in the light of the accelerated expansion of digitisation and networking into more and more areas of practice this projected move of self-education

from the periphery to the core of society and the educational profession should be a sure thing. However, that is apparently not quite the case. To the contrary, the activity systems of 'schooling' have remained incredibly resilient and relatively resistant to any fundamental challenge to their underlying core patterns and dogmas. In some ways, the digital transformation was even used to expand the reach of 'schooling' into realms of higher education that had partially preserved alternative patterns of responsibility, division of labour, evaluation, and so forth. Almost in parallel to Candy's hopeful statement regarding a possible renaissance of independent pursuits of learning Himanen (2001) shared the following observation: "The irony is that currently the academy tends to model its learning structure on the monastic sender-receiver model. The irony is usually only amplified when the academy starts to build a 'virtual university: the result is a computerized monastery school'' (p.76). The gift wrapping approach in which digital instruments are 'merely wrapped around old frameworks for education' (Fischer & Scharff, 1998, p. 6) is very well and alive in contemporary higher education and beyond. Noble (1998) even warned that from his perspective the dominating form of digital (re-)instrumentation in higher education is "not a progressive trend towards a new era at all, but a regressive trend, towards the rather old era of mass production, standardization and purely commercial interests...'' (p. 1).

As a continuous observer and regular collaborator in the field that trades under the somewhat unfortunate label of 'technology enhanced learning' I cannot help but confirm that these critical remarks are still very much on the spot. Even the progressively expanding instrumentation options in the digital realm are regularly stripped of their emancipatory potential for independent, individual and collective learning activity as soon as the various professions that have started to colonise the field of education get a hold of it and put it into place within the activity system of 'schooling'.

A recent incarnation of the overall tendency to assimilate and somewhat neutralise ideas of freedom, self-organisation or self-direction in learning can be found in the contemporary discourse on personal learning environments (PLEs). While the notion of personal learning environments emerged as a counter-concept to the dominating digital instrumentation of formal teaching and learning activity, it quickly was re-interpreted by the 'engineering crowd' of the wider activity system of schooling as a predominantly computational challenge that would allow the integration of distributed digital tools and services in an institutional landscape, while maintaining the integrity of the systems core functions of control, assessment, guidance, and so forth. What started out as a notion of individual instrumentation of 'personal learning' in many cases was quickly turned into the provision of 'personalised' interfaces to institutionally sanctioned sets of tools and contents - of course, always with the promise to make things more efficient and convenient for anyone. In an incredibly short time the whole contemporary discourse on PLEs became dominated by the search of technical solutions to the requirements allegedly dictated by the inner logic and demands of the overall system of 'schooling' (Fiedler & Väljataga, 2011). It wasn't any more about the development, maintenance and digital instrumentation of individual and idiosyncratic environments for personal learning as an object of inquiry and change. All attention shifted to the institutional landscapes of tools and services and how they could be re-engineered in order to make

a better fit with a range of practices that people had allegedly adopted in the context of social software and the so called read-and-write Web (Fiedler & Väljataga, 2013). It is more than likely that one main outcome of these efforts will be the preservation of the core patterns that drive the rationale of teaching dependent learning activity.

Though I have presented these short sketches of how the discourse on self-direction in learning and around the more recent notion of personal learning environments has successfully been twisted and tweaked by the proponents of 'schooling' as the primary form of systematic human change through learning across the lifespan, I don't want to imply that de-contextualised, instructed learning has no contenders or competitors and cannot be challenged successfully under the present cultural-historical conditions. To the contrary, I want to suggest that the digital transformation offers the chance not only for the renaissance and further development of older, formerly marginalised, forms of learning activity. Altogether, it also seems to catalyse the development of historically new forms of learning activity.

Emergence of new forms of emancipated learning activity

The progressive manifestation of global digitisation and networking as the new leading medium of our time seems to 'provide totally new and rather inexhaustible potentials to human practice' (Rückriem, 2009, p. 89) on one hand, while posing formidable developmental challenges for individuals and a wide range - if not all - societal activity systems on the other. We seem to be living through a cultural transition phase characterised by mounting tensions and some outright contradictions within existing systems of human activity and social practice. Human needs, dispositions, and activities seemingly co-evolve and shape the further development of the leading medium, just as much as they are shaped by the leading medium and its evolving range of instrumentation options. Since the speed and visibility of this transformational, co-evolutionary drift has been particularly high within societal systems of work and production, it comes with little surprise that the changing nature of work has become dominant within the discourse on and theorising about human dispositions and their systematic development through 'learning' (see for example Hakkarainen, Palonen, Paavola, & Lehtinen, 2004). This tendency has resulted in mounting societal pressure on all levels of institutionalised systems of formal education, and the repeated cry for their radical reform and better alignment to the perceived needs, demands and requirements of the various, inter-linked systems of work and their ongoing transformation.

One recent response to these continuous calls for reform is the attempt to outline and project a 'new culture of learning' (see for example Erdmann and Rückriem (2010); Giest, 2010; Giest & Lompscher, 2004; Heyse, Erpenbeck, & Michel, 2002; Jünger, 2004; Thomas & Seely Brown, 2011). Though I tend to agree with Erdmann and Rückriem (2010) who attest that at this point in time the term is mostly used as a 'container' for a wide and disparate range of observations and deliberations, the notion of a 'new culture of learning' seems to be somewhat instrumental for widening again the

scope of analytical and empirical inquiry into new forms of individual and collective learning activity beyond the monopolistic teaching based approach to education (see for example Thomas & Seely Brown, 2011).

Regardless, if scholars make an explicit use of this container term, we are seeing an increasing number of descriptive, empirical work focusing on particular (sub-)cultures of learning that are seemingly co-evolving together with the ongoing development of the new leading medium and the instrumentation and mediation options it provides. While this is certainly not the place for a comprehensive overview of such descriptive and analytical efforts, some selected examples might help to illustrate the type of contributions that I have in mind here.

The open learning model of hackers

In the context of his work on the culture and ethics of hackers Himanen (2001) also described 'the hacker learner model' that he sees closely related to the open academic model ideally guiding all free, scientific research. For Himanen…

'…hackers' learning is modelled the same way as their development of new software (which can actually be seen as the frontier of their collective learning). Thus, their learning model has the same strengths as the development model. A typical hacker's learning process starts out with setting up an interesting problem, working toward a solution by using various sources, then submitting the solution to extensive testing. Learning more about a subject becomes the hacker's passion' (p. 73)

Another strength of this learning model is apparently the fact that 'it is a continuously evolving learning environment created by the learners themselves. The learning model adopted by hackers has many advantages. In the hacker world, the teachers or assemblers of information sources are often those who have just learned something' (p. 75). It seems important to note here that the provision of open 'content' in the sense of specifically designed instructional materials or artefacts allegedly play no significant role whatsoever. Himanen finally summarises his reflections on the learning of hackers in the following words:

'after the hackers' reminder of the full significance of the academic model, it would be odd to continue our current practice of providing learners mainly with results, without making them learn much more deeply the academic model itself, which is based on a collective process of posing of problems, the questioning of them, and the development of solutions-a process driven by passion and recognition for socially valuable contributions' (p. 79).

Altogether Himanen's descriptions deliver a form of collective, emancipated learning activity that seems to be organised rather around problems, questions, and prototypical solutions that get scrutinised and tested, than specifically designed educational contents of any kind.

Open learning around affinity spaces

Another descriptive, analytical contribution is offered by Gee (2004) who in the context of his research on computer gaming and learning, has come up with the description of 'affinity spaces' as 'another important social configuration in which people participate and learn' (p. 70). Gee further emphasises that 'modern technologies allow the creation of more and more spaces where people can enter and interact with others (and with objects and tools) at a distance. So when I talk about 'spaces' I don't mean just physical spaces' (p. 71-72). He argues that affinity spaces are an important contemporary form of social affiliation. Oblinger and Lombardi (2008) suggest that, for example, 'social networking Web sites, fan-fiction communities, multiuser online gaming environments, and other immersive online experiences where sociability is placed in service of a common creative enterprise' (p. 392) can be described as such self-organising, affinity spaces. Oblinger and Lombardi (2008) also hold the view that these affinity spaces 'capture key aspects of active learning environments, including abundant cooperation, self-expression, and collaborative problem solving' (p. 392). Gee (2004) makes clear that 'what people have an affinity with (or for) in an affinity space is not first and foremost the other people using the space, but the endeavour or interest around which the space is organized' (p. 77). Gee and others are able to describe elaborate forms of learning activity around these digitally enabled affinity spaces that show no sign of teaching activity or explicit educational content provision in a traditional sense.

Sense-constituting learning in a global, networked society

While many of the attempts to describe emerging forms of learning activity within the digital transformation focus on collectives as their preferred unit of analysis, Erdmann and Rückriem (2010) take a decidedly different perspective. In the context of their media-historical analysis of learning these scholars describe a new type of learning activity that emerges in the wake of the global, digital transformation. They label this new media-historical type as 're-contextualised, sense-constituting, reflexive learning' (German: rekontextualisiertes sinnkonstituierendes reflexives Lernen). What gets on centre-stage is the learning of sense-constituting or sense-making. Erdmann and Rückriem acknowledge that the former (media-) historical types of learning were also 'sense-based', of course. However, sense was either coupled with the actual contextualised personal (and social) experience, or the de-contextualised (book-) knowledge. What the authors see emerging is the de-coupling of knowledge (generating) systems and meaning (generating/constituting) systems in the information society. Since sense-orientating traditions, social norms, and commonly shared cultural values are under permanent development within an increasingly networked global society, we find ourselves in a permanent crises of collective meaning and personal sense. Learning how to find or constitute sense becomes thus an important individual and societal task. Erdmann and Rückriem (2010) furthermore propose that the historical types of learning they have identified in their analysis have emerged and developed in a successive, irreversible manner. However, these learning types co-exist largely unconnected in this early stage of the unfolding cultural transformation.

Beyond the 'master explanator'

Together the rising number of analytical descriptions that capture various emergent forms of digitally mediated learning activity deliver mounting evidence that it is time to move beyond the 'content fetish' and the obsession with instruction dependent learning activity in educational research and practice. I have my doubts that the open education and open educational resource movement is actually prepared for such a shift of perspective. Many proponents of OER seem to be happily remaining within the conceptual boundaries of the activity system of 'schooling' and its insistence on de-contextualised, instruction dependent learning activity. While they are promoting 'open educational practices' of various kinds, they seem to have a hard time imagining practices of free, autodidactic, self-education in a digital and networked world, without relying on any 'master explicator' as Ranciere (1991) has put it. Ranciere (1991) said about autodidactic self-education, which he oddly calls 'universal teaching', that …

'…this method is practiced of necessity by everyone, but no one wants to recognize it, no one wants to cope with the intellectual revolution it signifies. The social circle, the order of things, prevents it from being recognized for what it is: the true method by which everyone learns and by which everyone can take the measure of his capacity. One must dare to recognize it and pursue the open verification of its power - otherwise, the method of powerlessness, the Old Master, will last as long as the order of things…' (p. 16).

Fundamentally, there is good reason to believe that the mainstream OER movement either intentionally or unintentionally tends to serve the Old Master.

Personal learning as open and networked autodidaxy

A lot of descriptive research that tries to portray emerging modes of learning activity in the context of the digital transformation of society seems to focus on collectives of various kinds as their primary unit of analysis (activity systems, networks, communities, spaces, and so forth). While this certainly produces important insights I would like to suggest that we could equally gain from carrying out systematic inquiry on individual autodidaxy as the personal and independent pursuit of learning under the emerging conditions of expanding networking and digitisation.

In parallel to the ongoing efforts of digital re-instrumentation of formal education the last decade has actually seen a steady increase of accessible and affordable digital instrumentation options for all kinds of individual and collective learning activity fully de-coupled from teaching and instruction. Individuals are actually managing to form, shape, and maintain their personal learning environments and networks by experimentally combining digital and non-digital instruments and resources around their own interests and projects. They partially externalise their learning activity through published, addressable, digital records of (communicative, productive, explorative) action, items of experience and reflection, and items of intention and chance-seeking (Bardone, 2011), mediated by an array of loosely-coupled, networked instruments. This partial 'open-sourcing' of efforts of personal learning affords the emergence of a wide range of networked learning practices that range from turning one's own digital traces

into a potential open resource for others to the development of inter-personal, collective learning activity with other networked subjects.

The digital traces of such semi-open endeavours of self-education display qualities that are radically different from the standard items of purpose-designed, de-contextualised knowledge that tend to be used in the context of instruction-dependent learning activity. In fact, what one can regularly find are elements of networked narrative; biographical contextualisation of various kinds; and the description of problems, distractions, deviations, chance encounters, moments of serendipity, and so forth. Not a surprise really, since earlier research on autodidaxy had regularly recorded that…

'Accident or serendipity plays an important role in determining the direction that many learning projects take. Chance meetings, offhand comments, resources accidentally discovered or mentioned in conversation, and changing life circumstances all contribute to the form and extent or individual learning projects, and few if any of these features could be anticipated or predicted at the beginning. Linked to this is the nonlinear nature of such learning efforts, which often zigzag from one 'organizing circumstance' to the next in an apparently random way…' (Candy (1991), p. 199).

What is still relatively new, however, is the ease of creation of publicly accessible and addressable records of these personal trajectories of learning on the global network.

Around ten years ago I tried to interpret and describe the emerging personal web-publishing practices (weblogs, webfeeds, and so forth) as a 'reflective conversational tool for self-organized learning' (Fiedler, 2003). A decade later these practices still represent some core instruments for mediating many open manifestations of networked autodidaxy. However, the scope and availability of web-publishing tools, services and mobile devices that can be combined for the recording, creative expression and narration of learning actions has grown tremendously. This potentially enriches our capability to mediate learning conversations, with ourselves and others. And the range of digital artefacts that we can draw into our networked conversations is still expanding steadily.

What seems remarkable to me here is the fact that these networked accounts of personal learning start to form a whole new, and very interesting, class of open resources for learning. Regardless of the fact that they hardly ever comply with the criteria of quality (such as structure, clarity in exposition, transparency of goals, and so forth) that are promoted for purpose-designed educational resources. In a situation of abundance of information artefacts on just about every topic the actual acquisition of primary material of adequate quality becomes a marginal issue. It becomes rather an occasional nuisance, than a fundamental barrier to follow a particular learning intention. And this is exactly why it might become increasingly interesting and important to be able to trace the very personal, highly idiosyncratic trajectories of intentional learning of others within the global network. These accessible records of personal sense-making generally display a much deeper biographical and/or professional contextualisation than we could ever hope to gain from standard educational resources, regardless if they are delivered with an open license or not. Engaging with and inquiring into this type of

record might become equally important than collecting resources that have been sanitised for 'educational' consumption.

If Erdmann and Rückriem (2010) are not completely wrong with their analytical projection of a new media-historical type of 'contextualised, sense-constituting, reflexive learning' emerging within the global networked society, then we need to think about how we can achieve the partial reification - metaphorically speaking: the 'open-sourcing' - of personal sense-making. Only then we could hope to turn it into an object of inquiry and potential improvement over time (Fiedler, 2012). It seems to me that contemporary expressions of networked autodidaxy on the network could be interpreted as rudimentary 'proto-types' of the kind of open resources that might support the further development of historically new forms of learning activity.

Recently, Seely Brown (2010) has reminded us that…

"…although learning about and learning to be worked well in a relative stable world, in a world of constant flux, we need to embrace a theory of *learning to become*. Where most theories of learning see becoming as a transitional state toward becoming something, the twenty-first century requires us to think of learning as a practice of becoming over and over again. In order to understand what that means and how it might be achieved, we need to examine some of the new modes of learning that have emerged…'' (p. xi-xii).

Networked autodidaxy and the open-sourcing of personal learning might just be one of these.

Coda

From my perspective the types of 'problem descriptions' that the OER movement promotes and claims to address remain largely within the boundaries of the activity system of 'schooling' and its specific needs, requirements and overall rationale. It has thus inherited the very same 'content fetish' that is driving much of formal education as the hegemonic form of systematic, intentional human change through learning in all societies that are heavily invested in the book and print culture. As long as OERs and practices are always treated as simply another element in this larger fabric of de-contextualised, instructed 'learning', it seems difficult to imagine that we can engage in a truly co-evolutionary drift with the unfolding digital transformation. The abundance of (potentially networked) human artefacts and the diversity of knowledge claims this transformation apparently produces, cannot be met by an accelerated production and consumption of "quality content" alone - regardless if such content carries open licenses or not. It rather calls for a collective shift of focus towards the further development of historically new forms of learning activity in an increasingly networked, global society. If we dare to look beyond the boundaries of contemporary formal education we might be able to describe some embryonic forms of such emerging learning activity and reformulate our ideas of the role of open resources and open practices accordingly.

More than anything we need to scrutinise our problem descriptions within the unfolding digital transformation and expose our present 'boundary judgments' (see for example Midgley, 2000) - of what currently is and what should be - to review and critique. Only then we will be able to evaluate if 'open resources' and "open practices" can actually play a transformative role for (self-) education.

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